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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q87211

Tomonari YOMODA, et al.

Appln. No.: 10/529,757

Group Art Unit: 2857

Confirmation No.: 1590

Examiner: Donald E. McEleheny Jr.

Filed: March 30, 2005

For: EARTHQUAKE PREDICTION METHOD AND SYSTEM

**SUBMISSION OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
Sir:

For the Examiner's convenience, enclosed herewith is a copy of the English translation of the International Preliminary Report on Patentability (IPRP). Copies of the cited references as required by §371(c) are being submitted with the Letter Concerning Information Disclosure Statement being filed concurrently herewith.

Respectfully submitted,

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WASHINGTON OFFICE  
**23373**  
CUSTOMER NUMBER

Date: July 18, 2006

From the INTERNATIONAL BUREAU

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II)  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

To:

MIYAZAKI, Teruo  
8th Floor, 16th Kowa Bldg.  
9-20, Akasaka 1-chome  
Minato-ku, Tokyo 1070052  
JAPON

MAY 26, 2006

Date of mailing (day/month/year) 18 May 2006 (18.05.2006)
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Applicant's or agent's file reference NEC04P109A
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**IMPORTANT NOTIFICATION**

International application No. PCT/JP2004/011818
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International filing date (day/month/year)  
18 August 2004 (18.08.2004)

Applicant NEC MOBILING, LTD. et al
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**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

**2. Transmittal of the copy of the translation to the designated or elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

**It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.**

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Yoshiko Kuwahara

Facsimile No.+41 22 740 14 35

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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference NEC04P109A	FOR FURTHER ACTION      See item 4 below	
International application No. PCT/JP2004/011818	International filing date ( <i>day/month/year</i> ) 18 August 2004 (18.08.2004)	Priority date ( <i>day/month/year</i> ) 27 August 2003 (27.08.2003)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant NEC MOBILING, LTD.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
2. This REPORT consists of a total of 6 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input checked="" type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

	Date of issuance of this report 08 May 2006 (08.05.2006)
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The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 740 14 35	Authorized officer  <b>Yoshiko Kuwahara</b>  Telephone No. +41 22 338 90 90
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**PATENT COOPERATION TREATY**

**From the**  
**INTERNATIONAL SEARCHING AUTHORITY**

To:

**TRANSLATION**  
**PCT**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

		Date of mailing (day/month/year)
Applicant's or agent's file reference <b>NEC04P109A</b>		<b>FOR FURTHER ACTION</b> See paragraph 2 below
International application No. <b>PCT/JP2004/011818</b>	International filing date (day/month/year) <b>18.08.2004</b>	Priority date (day/month/year) <b>27.08.2003</b>
International Patent Classification (IPC) or both national classification and IPC		
Applicant <b>NEC MOBILING, LTD.</b>		

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/JP2004/011818

Box No. I	Basis of this opinion
1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.	
<input type="checkbox"/> This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).	
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:	
a. type of material	
<input type="checkbox"/> a sequence listing	
<input type="checkbox"/> table(s) related to the sequence listing	
b. format of material	
<input type="checkbox"/> in written format	
<input type="checkbox"/> in computer readable form	
c. time of filing/furnishing	
<input type="checkbox"/> contained in the international application as filed.	
<input type="checkbox"/> filed together with the international application in computer readable form.	
<input type="checkbox"/> furnished subsequently to this Authority for the purposes of search.	
3. <input type="checkbox"/> In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.	
4. Additional comments:	

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INTERNATIONAL SEARCHING AUTHORITY

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Box No. IV

Lack of unity of invention

1.  In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:
  - paid additional fees
  - paid additional fees under protest
  - not paid additional fees
2.  This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
  - complied with
  - not complied with for the following reasons:

The matter which is common in the subject matters of claims 1 and 6 is observing a magnetic field to predict earthquakes. However, observing a magnetic field to predict earthquakes is well known as described in the documents of "Japanese Patent Laid-open No. 2002-267762" and "Japanese Patent Laid-open No. 9-105781".

As a result, this common matter is not a special technical feature in the sense of PCT Rule 13.2, since observing a magnetic field to predict earthquakes is within the scope of the prior art.

Therefore, the subject matters of claims 1 and 6 have no common matter.

4. Consequently, this opinion has been established in respect of the following parts of the international application:

- all parts
- the parts relating to claims Nos. \_\_\_\_\_

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
**PCT/JP2004/011818**

Box No. V	<b>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b>																			
<p><b>1. Statement</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Novelty (N)</td> <td style="width: 60%;">Claims    <u>1-5, 7-9, 11, 12</u></td> <td style="width: 25%; text-align: right;">YES</td> </tr> <tr> <td></td> <td>Claims    <u>6, 10</u></td> <td style="text-align: right;">NO</td> </tr> <tr> <td>Inventive step (IS)</td> <td>Claims    <u>2, 3, 12</u></td> <td style="text-align: right;">YES</td> </tr> <tr> <td></td> <td>Claims    <u>1, 4-11</u></td> <td style="text-align: right;">NO</td> </tr> <tr> <td>Industrial applicability (IA)</td> <td>Claims    <u>1-12</u></td> <td style="text-align: right;">YES</td> </tr> <tr> <td></td> <td>Claims</td> <td style="text-align: right;">NO</td> </tr> </table> <p><b>2. Citations and explanations:</b></p> <p>Document 1: JP1-094286, A (Yusei-Sho Tsushin Sogo Kenkyusho), 12 April, 1989 (12.04.89), full text, &amp; US, 4904943, A</p> <p>Document 2: Takeshi Nakayama, Atotsgawa Dangojo (Amao Miyagawa) ni Okeru Denjikiteki Tokusei (Joho), Kyoto Daigaku Bosai Kenkyusho Nenpo, 1987, No. 30 B-1, pages 47-55</p> <p>Document 3: JP, 9-26478, A (Harunari Kuratomi), 28 January, 1997 (28.01.97), column 4, lines 38-46 (Family: none)</p> <p>Document 4: JP, 2003-215259, A (Yamaha Corporation), 30 July, 2003 (30.07.03), paragraphs [0005]-[0006] and [0015] (Family: none)</p> <p>Document 5: JP, 10-319128, A (Nippon Nessui Kaihatsu Kabushiki Kaisha), 4 December, 1998 (04.12.98), paragraph [0017] (Family: none)</p> <p>Document 6: JP, 2003-043153, A (NEC Engineering, Ltd.), 13 February, 2003 (13.02.03), paragraph [0028] (Family: none)</p> <p>Document 7: JP, 2003-042834, A (Naigai Rubber Industries Co., Ltd.), 13 February, 2003 (13.02.03), paragraph [0007] (Family: none)</p> <p>The subject matters of claims 1 and 5 do not appear to involve an inventive step in view of document 1 and document 2 (page 51) cited in the ISR. Document 1 describes an earthquake prediction method using an earth current. Document 2 describes that a change in earth electric potential (earth current) and a change in magnetic field which is orthogonal thereto correspond closely to each other, and employing the determination of earth current from the magnetic field as described in document 2 in the earthquake prediction method described in document 1 would be easy for a person skilled in the art.</p> <p>The subject matter of claim 4 does not appear to involve an inventive step in view of document 1 and document 3 cited in the ISR. Employing setting a region on which earth currents are focused to a source region as described in document 3 in the earthquake prediction method described in document 1 would be easy for a person skilled in the art.</p> <p>The subject matters of claims 6 and 10 do not appear to be novel or to involve an inventive step, since they are described in document 4 cited in the ISR.</p> <p>The subject matter of claim 7 does not appear to involve an inventive step in view of document 2 and document 4 cited in the ISR. Document 4 describes a portable terminal equipped with a magnetic sensor and a GPS, and an information processing center which creates an earth magnetic map based on information sent from said portable terminal. Document 2 discloses a correlation between an earth current induction magnetic field and an earth current, and employing this in document 4 would be easy for a person skilled in the art.</p>			Novelty (N)	Claims <u>1-5, 7-9, 11, 12</u>	YES		Claims <u>6, 10</u>	NO	Inventive step (IS)	Claims <u>2, 3, 12</u>	YES		Claims <u>1, 4-11</u>	NO	Industrial applicability (IA)	Claims <u>1-12</u>	YES		Claims	NO
Novelty (N)	Claims <u>1-5, 7-9, 11, 12</u>	YES																		
	Claims <u>6, 10</u>	NO																		
Inventive step (IS)	Claims <u>2, 3, 12</u>	YES																		
	Claims <u>1, 4-11</u>	NO																		
Industrial applicability (IA)	Claims <u>1-12</u>	YES																		
	Claims	NO																		

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

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Box No. V

Reasoned statement under Rule 43bis.I(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

The subject matter of claim 8 does not appear to involve an inventive step in view of document 4 and document 5 cited in the ISR. Document 5 (paragraph [0017]) describes the use of a positioning system (GPS) using an artificial satellite, which is basically the same as that used in car navigation, and employing this in document 4 would be easy for a person skilled in the art.

The subject matter of claim 9 does not appear to involve an inventive step in view of document 4 and document 6 cited in the ISR. Employing the sending of data using an existing communication network such as the Internet as described in document 6 (paragraph [0028]) in document 4 would be easy for a person skilled in the art.

The subject matter of claim 11 does not appear to involve an inventive step in view of document 4 and document 7 cited in the ISR. Employing an earthquake sensor that generates a signal when detecting an earthquake motion as described in document 7 (paragraph [0007]) in document 4 would be easy for a person skilled in the art.

The subject matters of claims 2, 3 and 12 are neither described in any of the documents cited in the ISR nor obvious to a person skilled in the art.